



State of Utah

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Department of
Environmental Quality

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DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

M1035/0011
Leslie

AUG 13 2014

CERTIFIED MAIL

(Return Receipt Requested)

Ms. Paula Doughty
Manager – Tailings & Water Services
Kennecott Utah Copper
4700 Daybreak Parkway
South Jordan, Utah 84095

Dear Ms.  Doughty:

Subject: Notice of Violation and Compliance Order, Docket No. UGW14-07

Enclosed is the Notice of Violation and Compliance Order (Order), Docket Number UGW14-07, issued to you by the Division of Water Quality (DWQ). This Order has been issued as a result of an unauthorized discharge that occurred on Kennecott Utah Copper (KUC) property at the drop box H1A location. The release was described as mostly water with a small fraction of solids reported to have occurred on September 13, 2013 resulting from larger than normal flows overwhelming the drop box during a storm event. Based on information provided by KUC in the required release notification, this unauthorized discharge is in violation of *Utah Code Ann. §19-5-107*.

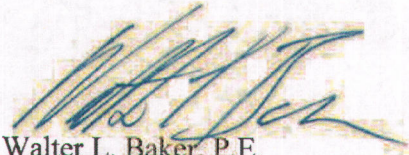
Please give the enclosed Notice of Violation and Compliance Order (NOV/CO) your immediate attention. A written response is required within 30 calendar days after receipt of this NOV/CO. **This order is fully enforceable unless appealed in writing within 30 days, as described in the "Notice" section of this NOV/CO. Any response or written answer to this NOV/CO should be addressed to Walter L. Baker, P.E., Director, Utah Division of Water Quality, P.O. Box 144870, Salt Lake City, UT 84114-4870.**

Ms. Doughty

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If you have any questions, please contact Brian Hamos at (801) 536-4384. A phone call to DWQ or a site visit does not alter the requirement to provide a timely written response if you wish to contest this NOV/CO.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Walter L. Baker', is positioned above the printed name.

Walter L. Baker, P.E.

Director

WLB:DH:BH:jn

Enclosure: Notice of Violation and Compliance Order, Docket No. UGW14-07

cc (w/encl): John Hoggan, Salt Lake Valley Health Department (via e-mail)
Copperton City Mayor (via e-mail)
Wendell Rigby, West Jordan City (via e-mail)
Kerri Fiedler, US EPA Region 8 (via e-mail)
Doug Bacon, DERR (via e-mail)
Paul Baker, DOGM (via e-mail)

DWQ-2014-009889

UTAH DIVISION OF WATER QUALITY

IN THE MATTER OF	:	DOCKET NUMBER UGW14-07
KENNECOTT UTAH	:	NOTICE OF VIOLATION
COPPER	:	AND COMPLIANCE ORDER

A. STATUTORY AUTHORITY

This **NOTICE OF VIOLATION and COMPLIANCE ORDER (NOV/CO)** is issued to Kennecott Utah Copper (hereafter **KUC**), by the UTAH DIVISION OF WATER QUALITY (**DWQ**) under the Utah Water Quality Act, Utah Code Ann. §§ 19-5-101 to 19-5-123 (the **ACT**), including sections 19-5-106, 19-5-111 and 19-5-115. This **NOV/CO** is also issued in accordance with the Utah Administrative Procedures Act, Utah Code Ann. §§ 63G-4-101 to 63G-4-601. The Director of the DWQ has authority to issue such NOTICES AND ORDERS in accordance with §19-5-106(2)(d) of the Utah Code.

B. APPLICABLE STATUTORY AND REGULATORY PROVISIONS

1. *UCA § 19-5-102(23)(a)* defines waters of the state as “all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state”.
2. *UCA § 19-5-107(1)(a)* states: “Except as provided in this chapter or rules made under it, it is unlawful for any person to discharge a pollutant into waters of the state or to cause pollution which constitutes a menace to public health and welfare, or is harmful to wildlife, fish or aquatic life, or impairs domestic, agricultural, industrial, recreational, or other beneficial uses of water, or to place or cause to be placed any waste in a location where there is probable cause to believe it will cause pollution.”
3. *UCA § 19-5-107(3)(a)* states: “It is unlawful for any person, without first securing a permit from the director, to: make any discharge or manage sewage sludge not authorized under an existing valid discharge permit”.
4. *UAC R317-1-2.1* states: “No person shall discharge wastewater or deposit wastes or other substances in violation of the requirements of these rules.”

5. *UAC R317-6-6.15(A)(1)&(2)* states: (1) Generally –R317-6-6.15 shall apply to any person who discharges pollutants into ground water in violation of Section 19-5-107, or places or causes to be placed any wastes in a location where there is probable cause to believe they will cause pollution in violation of Section 19-5-107.

(2) Corrective Action shall include, except as otherwise provided in R317-6-6.15, preparation of a Contaminant Investigation and preparation and implementation of a Corrective Action Plan.

C. FACTS

1. **KUC** operates a copper ore mine and concentrating facility (Copperton Concentrator) north of the town of Copperton in southwest Salt Lake County. The Concentrator uses a grinding and flotation process to concentrate copper ore. Waste material from this process, known as tailings, is conveyed in slurry form via a pipeline from the Concentrator north to **KUC** operations near the Great Salt Lake where the tailings are deposited in the north end tailings impoundment.
2. **KUC** has a Utah Ground Water Discharge Permit (No. UGW350017) for the Copperton Concentrator, which was renewed by the DWQ on February 26, 2009.
3. **KUC** has a Utah Ground Water Discharge Permit (No. UGW350011) for the Tailings Impoundment, which was renewed by the DWQ on January 12, 2011. Tailings from the Copperton Concentrator are transported via the tailings line to the Tailings Impoundment adjacent to the Great Salt Lake. Tailings are deposited in an engineered, lined and monitored impoundment subject to compliance limits and conditions as described in UGW 350011.
4. **KUC** also operates under Utah Pollutant Discharge Elimination System (UPDES) Permit (No. UT000051) effective on February 1, 2007 and is currently administratively extended as provided in Utah Administrative Code, Section R317-8-3.1.
5. Part II.I.1 of Ground Water Discharge Permit UGW350017 requires **KUC** to verbally report any noncompliance, or spills subject to the provisions of UCA 19-5-114, which may endanger public health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. In addition, Part II.I.2 of Permit UGW350017 requires **KUC** to provide a written notification to the Director within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain: a) a description of the noncompliance and its cause; b) the period of noncompliance, including exact dates and times; c) the estimated time noncompliance is expected to continue if it has not been corrected; and, d) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
6. A previous Notice of Violation and Order was issued against **KUC** on October 12, 2011, Docket No. UGW11-09 in connection with three pipeline spills in July, August and September of 2011. Related thereto, **KUC** signed and settled the Final Stipulation and

Consent Order on January 29, 2013. The Consent Order required **KUC** to modify the Copperton Permit, Appendix A, with the submitted BMP plan from the Notice of Violation and Consent Order.

7. **KUC** currently has two unresolved NOV's outstanding. Violation UGW13-02 is for a spill from a vent stack on the tailings pipeline near the Copperton Concentrator of approximately 696,000 gallons on February 4, 2013. Violation UGW14-02 is for a process water release of approximately 317,504 gallons from a box on a pipeline lateral near the Kennecott Power Plant on July 15, 2013.
8. The modified Appendix A of **KUC** Permit UGW350017 includes requirements with regard to:
 - **Spill Detection:** "Spills as a result of pipeline releases will be identified by one or more of the following measures: 1. Visual observation by roving operators or area personnel. The frequency of visual inspections as outlined in 2.2 may influence the detection time;" and
 - **Spill Reporting:** "These regulations require **KUC** to report a spill that "may cause pollution to groundwater" to the Division of Water Quality within 24 hours of the spill and submit a written notification within five days."
9. On September 20, 2013 **KUC** provided written notification to DWQ addressed to Ms. Kim Shelley and Mr. Dan Hall, describing several water management issues resulting from a storm event on September 13, 2013. The notification included spills from the Copperton Concentrator tailings pipeline at drop box H1A and drop box A.25. The cause of the spill at each drop box was described as larger than normal flows, resulting from the storm and an associated power outage shutting down pumps, overwhelming each drop box.
10. The September 13, 2013 drop box H1A spill was reported as mostly water with a small fraction of solids. An estimate of the duration and volume of the spill was not provided, but apparently most of the liquid accumulated between the two tailings pipelines, with a portion flowing down the embankment into Barney's Creek drainage (an ephemeral drainage).
11. The September 13, 2013 drop box A.25 spill was reported to have been collected between the pipelines immediately north and south of the box, stopped by earthen berms. In addition, solids were deposited in these locations. Additional fluid flowed along an access road and into an ephemeral drainage before encountering a berm in the drainage. An estimate of the duration and volume of the spill was not provided.
12. **KUC** personnel collected water samples from the September 13, 2013 drop box H1A and drop box A.25 spill areas.

13. In a letter dated April 10, 2014, DWQ requested laboratory analytical results from the samples collected from the September 13, 2013 drop box H1A and drop box A.25 spill areas as well as estimates of the volume of water and sediment released during the spills.
14. On June 27, 2014 **KUC** and DWQ personnel split three soil samples collected near drop box H1A including one adjacent to the tailings launder, one adjacent to Copperton Improvement District (CID) well W31, and one adjacent to CID W32. DWQ samples were analyzed for the Resource Conservation and Recovery Act (RCRA) metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) as well as Zn, Tl, Be, and Cu using the Synthetic Precipitation Leaching Procedure (SPLP) EPA Method 1312.

D. FINDINGS

1. An unauthorized discharge of tailings fluid of unreported volume occurred at drop box H1A and drop box A.25 on September 13, 2013 related to the severe storm event of that day.
2. The September 13, 2013 unauthorized discharge is located in the primary recharge area of the Salt Lake Valley principal aquifer. The principal aquifer is a drinking water source for the Salt Lake Valley and is unconfined at this location.
3. Two CID drinking water wells are located in the Barneys Creek drainage where an unquantified volume of the September 13, 2013 drop box H1A spill discharge flowed.
4. The Barneys Creek drainage into which the drop box H1A spill was discharged is within the Zone one protection zone of the CID drinking water wells (see Figure 1). Zone one is the area within a 100-foot radius from the wellhead.
5. Three samples of fluid from the discharge collected by **KUC** personnel exceeded ground water standards as summarized in the following table [all units are milligrams per liter (mg/l), bold indicates value above water quality standard]:

Parameter	Ground Water Quality Standard	A25 Pipeline Discharge Sample	A25 Drainage Bottom Sample	H1A Pipeline Discharge Sample
TDS	3,000 ^(a)	3,870	1,210	5,690
Sulfate	1,000 ^(b)	1,590	579	1,400
Arsenic	0.05 ^(c)	Not Detected	0.334	0.023

(a) The upper TDS limit for Class II Drinking Water Quality Ground Water is 3,000 mg/l (R317-6-3.5). The USEPA secondary drinking water standard for TDS is 500 mg/l. The Utah Division of Drinking Water lists a maximum contaminant value of 2,000 mg/l for TDS under Table 200-1 of R309-200-5, "If TDS is greater than 1,000 mg/l the supplier shall satisfactorily demonstrate to the board that no better water is available".

(b) Although Table 1 of R317-6-2.1 does not provide a standard for sulfate, a ground water quality standard for any pollutant not specified in Table 1 may be established by the Director at a level that will protect public health and the environment. This permit limit may be based on U.S. Environmental Protection Agency maximum contaminant level goals, health advisories, risk based contaminant levels, standards established by other regulatory agencies and other relevant information. The Utah Division of Drinking Water Table 200-1 MCL for sulfate of 1,000 mg/l where sulfate values in excess of 500 mg/l may only be used if no better quality water is available and the water shall not be provided for human consumption from commercial establishments.

(c) Primary Drinking Water Standard is 0.010 mg/l

6. SPLP results of leachate generated from the soil samples collected adjacent to each of the CID drinking water wells W31 and W32 contained arsenic of 0.154 mg/l and 0.178 mg/l. These values are over three times greater than the ground water quality standard of 0.050 mg/l and approximately fifteen times above the drinking water standard of 0.010 mg/l.

E. VIOLATIONS

Based on the foregoing **FACTS** and **FINDINGS**, **KUC** is in violation of:

1. *UCA § 19-5-107(1)(a)*, for discharging a pollutant into waters of the state or causing pollution which constitutes a menace to public health and welfare, or for placing or causing to be placed wastes in a location where there is probable cause to believe it will cause pollution.
2. *UCA § 19-5-107(3)*, for making a discharge not authorized under an existing valid permit.

F. ORDER

In view of the foregoing **FINDINGS**, and pursuant to *UCA § 19-5-106*, **KUC** is hereby ordered to:

- Provide a detailed written submission for the spill incident of September 13, 2013 within sixty days of receipt of this **ORDER** describing:
 - 1) The root cause of the unauthorized discharge;
 - 2) Calculations of the spill volume based on the time of the last inspection where no spill was detected and when the release was discovered;
 - 3) Corrective actions that have been or will be taken for the unauthorized discharge;
 - 4) Steps that will be taken to prevent reoccurrence of unauthorized discharges; and
 - 5) All parameters used to make the spill calculation estimate (including the estimate based on GPS mapping) such as, but not limited to estimated tailings flow volume and liquid/solid percentages.

- Within 60 days propose a location, depth, and time-table for the installation of a ground water monitoring well within the Barneys Canyon Creek drainage in an up-gradient location of CID drinking water well W31 for DWQ review and approval. The purpose of the monitoring well will be to detect potential contaminants in ground water resulting from periodic spills in the drop box H1A area before the CID well is impacted.
- Compile a table with all historic ground water monitoring results from CID well W31 and present a time-series plot for each detected constituent to illustrate if there are discernable trends in the data.
- Collect, analyze, and report the results of ground water samples from CID well W32 using the same analyte list for which W31 is sampled.
- Comply with *UAC § R317-6-6.15* including but not limited to Subpart (C) and within 30 days submit a proposed schedule for the submission of a Contaminant Investigation and Corrective Action Plan.
- Provide well logs, screen intervals and lithologic data from CID W31 and W32.

G. NOTICE

Compliance with the provisions of this NOV/CO is mandatory. Under DWQ's Penalty Criteria for Civil Settlement Negotiations, *UAC § R317-1-8*, KUC's good faith efforts to comply with this Compliance Order may impact the monetary penalty that would apply in a settlement. Providing false information may subject KUC to further civil penalties or criminal fines.

UCA § 19-5-115 provides that a violation of the ACT or a related order may be subject to a civil penalty of up to \$10,000 per day of violation. Under certain circumstances of willfulness or gross negligence, violators may be fined up to \$25,000 per day of violation.

H. CONTESTING THIS NOV/CO

This NOV/CO is effective immediately and shall become final unless contested in writing within thirty (30) days after the date this NOV/CO was signed. See *UAC § R305-7-303(5) and (8)*. Any further administrative proceedings in this case shall be conducted formally under *UCA § 63G-4-204 to 601*.

To contest this NOV/CO, you must respond in writing and must comply with the requirements of the Administrative Rules of the Water Quality Board, found at *UAC § R317-9* and with the requirements of the Utah Administrative Procedures Act, including *UCA § 63G-4-201(3)(a) and (b)*. Those provisions of the Utah Administrative Procedures Act require, among other things, that you state your factual and legal reasons for disagreeing with the NOV/CO, and that you state the action that you would like the agency to take (e.g., withdrawing the NOV/CO). A copy of *UCA § 63G-4-201(3)(a) and (b)* is provided at the end of this document.

A response contesting this **NOV/CO** must be received by the Director within 30 days of the date this **NOV/CO** was signed. The Director's address is:


(Mailing address)
Walter L. Baker, P.E.
Utah Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870

(Address for hand or overnight delivery)
Walter L. Baker, P.E.
Multi-Agency State Office Building
195 North 1950 West
Salt Lake City, UT 84114-4870

You will not be allowed to contest this **NOV/CO** in court or in any other forum if you do not first contest the **NOV/CO** as described above.

Signed this 13 day of August, 2014.

UTAH DIVISION OF WATER QUALITY


Walter L. Baker, P.E.
Director

Utah Code Ann. § 63G-4-201(3)(a) and (b):

- (a) Where the law applicable to the agency permits persons other than the agency to initiate adjudicative proceedings, that person's request for agency action shall be in writing and signed by the person invoking the jurisdiction of the agency, or by that person's representative, and shall include:
- (i) the names and addresses of all persons to whom a copy of the request for agency action is being sent;
 - (ii) the agency's file number or other reference number, if known;
 - (iii) the date that the request for agency action was mailed;
 - (iv) a statement of the legal authority and jurisdiction under which agency action is requested;
 - (v) a statement of the relief or action sought from the agency; and
 - (vi) a statement of the facts and reasons forming the basis for relief or agency action.
- (b) The person requesting agency action shall file the request with the agency and shall mail a copy to each person known to have a direct interest in the requested agency action.

DWQ-2014-009888